

REMARKS

Claims 1-69 were previously pending in this application. Claims 17-65 were previously withdrawn as the result of a Restriction Requirement. No new claims are added and no claim amendments are included herein. As a result claims 1-16 and 66-69 are pending for examination with claim 1 being an independent claim.

Finality of the Rejection

As the Examiner is well aware, a “second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant’s amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17 (p).” (MPEP 706.07(a).) No information disclosure statement was filed during the time period described above in this application. Further, the instant Office Action introduces at least three new grounds of rejection: first, citing/applying U.S. Patent No. 6,073,289 to Bolden et al. (hereinafter “Bolden”) for the first time in the Office Action; second, in applying U.S. Patent Publication No. 2002/0194678 to Chung (hereinafter “Chung”) in a completely different manner than previously asserted; and third, in citing/applying U.S. Patent 6,098,000 to Long et al. (hereinafter “Long”) for the first time in the instant Office Action. These new grounds of rejection were not necessitated by Applicant’s amendment of the claims. Because the finality of this rejection is premature, Applicant respectfully requests reconsideration and withdrawal of the finality of the rejection.

Regarding Bolden and Long, Applicant refers to the Form 892 included with the instant Office Action where Bolden and Long are first made of record. Regarding Chung, Applicant refers to the Office Action mailed January 4, 2006. That Office Action rejects the claims in view of Figs. 4A, 4C, 4F, 5A, 6 and 8C of Chung. (Office Action of 1/4/06 at page 6.) Conversely, the instant Office Action rejects the claims in view of Fig. 9 of Chung. (Office Action at page 6.) Fig. 9 of Chung presents a completely different embodiment than those illustrated in Figs. 4A, 4C, 4F, 5A, 6 and 8C. (For example, see Brief Description of the Drawings where Figs. 4, 5,

6, 8 and 9 are described as showing fourth, fifth, sixth, eighth and ninth embodiments, respectively.)

The instant Office Action states that “Applicants’ amendment necessitated the new ground(s) of rejection presented in this Office action.” (Office Action at page 9.) As explained below, there is no rational basis for the finality of the rejection in view of the amendments included in the prior Response when Bolden and Long are newly of record and Fig. 9 of Chung is first applied.

The full extent of the amendments included in Applicant’s previous reply mailed May 4, 2006 is as follows (with changes highlighted):

in claim 1, “~~a self closing~~ cover configured to be biased open by a mechanical device;”

in claim 66, “wherein the cover is hingedly coupled to the valve~~inflatable bladder~~;” and

the addition of new claim 69, “wherein the cover comprises a self-closing cover.” Applicant also notes that previously-presented claim 67 recited “a mechanical device configured to bias open the cover.”

First, Long is applied in rejecting claims 7-9. None of claims 7-9 were amended in the Applicant’s immediately preceding reply. Thus, the above amendments could not have possibly necessitated the initial citation of Long in the instant Office Action.

Second, neither of Bolden, Chung nor Long is applied in rejecting claim 66. Accordingly, the amendment to claim 66 could not possibly have necessitated the initial citation of Bolden or Long. Because Chung is also not applied in rejecting claim 66, the amendment to claim 66 could also not possibly have necessitated the new application of Chung.

Third, new claim 69 could not possibly have necessitated the initial citation of Bolden or Long nor the new application of Chung because new claim 69 simply recites a limitation that was removed from claim 1 from which claim 69 directly depends.

Fourth, the addition of the “mechanical device” in claim 1 does not warrant a final rejection in view of either Bolden or Chung because the added limitation (i.e., “mechanical

device") appears in a previously presented claim that the instant Office Action asserts is anticipated by both Bolden and Chung. (See claim 67 and the Office Action at pages 4-5.)

Fifth, the deletion of "self-closing" from claim 1 does not warrant a final rejection in view of either Bolden or Chung because the deleted limitation (i.e., "self-closing cover") appears in a claim which is allegedly anticipated by both Bolden and Chung. (See claim 69 and the Office Action at pages 4-5.)

Because the instant Office Action introduces many new grounds of rejection that are neither necessitated by Applicant's amendment of the claims nor based on information submitted in an information disclosure statement, the Office Action must be made non-final. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the finality of the rejection. Should the Examiner maintain the finality of the Office Action Applicant requests a telephone conference with the Examiner and the Examiner's Supervisor to address the clear inappropriateness of the finality of the Office Action

Information Disclosure Statement

The Office Action notes Applicant's reference to various PCT applications in the IDS of August 2, 2004, but then goes on to describe a complete lack of understanding concerning the "correspondence" of the PCT applications to corresponding U.S. applications despite the detailed explanation provided in Applicant's previous Amendment and Response. In particular, the Office Action states that the applications do "not appear as corresponding." (Office Action at page 2.) Applicant refers the Examiner to the Applicant's Preliminary Amendment, Amended ADS and Petition to Correct Filing Receipt which were mailed to the U.S. Patent Office on April 18, 2005. Applicant again refers the Examiner to the Corrected Filing Receipt subsequently mailed from the U.S. Patent Office on April 29, 2005. All of the preceding clearly describe the relationship of the instant application to the priority applications, which is again summarized here for the convenience of the Examiner.

Application	Correspondence/Continuity Type	Related Application
This Application	Corresponds to the International Application filed on the same date	PCT/US03/37230
This Application is	An application claiming the benefit under 35 USC 119(e) of	60/427,151
This Application is	An application claiming the benefit under 35 USC 119(e) of	60/427,307
This Application is	A continuation-in-part of	10/430,040
10/430,040 is	An application claiming the benefit under 35 USC 119(e) of	60/377,798
10/430,040	Corresponds to the International Application filed on the same date	PCT/US03/14116
This Application is	A continuation-in-part of	10/192,757
10/192,757 is	An application claiming the benefit under 35 USC 119(e)	60/304,274
10/192,757 is	An application claiming the benefit under 35 USC 119(e)	60/374,403
10/192,757	Corresponds to the International Application filed on the same date	PCT/US02/21756

These applications share at least one or more figures in common with the instant application. If the Examiner still does not understand the correspondence of the PCT applications, Applicant requests that the Examiner and the Examiner's supervisor contact the undersigned.

Rejection under 35 U.S.C. §112

The Office Action rejects claim 69 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to comply with the written description requirement. In particular, the Office Action asserts that “it is not necessarily apparent that the specification defines a ‘cover’ that ‘returns, without any external aid’ or ‘[requires] … no external force.’ (Office Action at page 3.) Applicant respectfully disagrees and finds that one of ordinary skill in the art would find it necessarily apparent that the cover is “self-closing” for at least the reasons described below. Further, Applicant finds that the term “self-closing” on its face is clear and unambiguous (i.e., “self-explanatory”) to those of ordinary skill in the art. Thus, the Office Action’s assertion that the term “self-closing” is indefinite without “Applicant’s own definition” is moot in view of the plain meaning of the term “self-closing.”

First, addressing the use of “self-” used in combination with other terms to form an adjective, the Kernerman Multilingual English Dictionary accessible via Dictionary.com refers to the following definitions which are consistent with the use of “self-” in combination with “closing” in the claims:

- 1) showing that the thing is acting automatically, as in self-closing doors (emphasis added);
- 2) by oneself, as in self-made; and
- 3) showing that the person or thing acting is acting upon himself or itself, as in self-respect.

The preceding demonstrate that the term “self-closing” is readily understood by those of ordinary skill in the art without any further background. The Office Action’s implication that the Applicant was somehow employing his own definition in the prior Response mischaracterizes that Response because no such definitions were offered nor were any needed because the term “self-closing” is self-explanatory. In particular, “without any external aid” and “requiring no external force” are simply alternate ways of stating the commonly understood meaning of the term “self-closing,” see above.

Second, when viewed in its entirety, the application as originally-filed places the term “self-closing” in context such that the self-closing operation of the cover is necessarily apparent

to one of ordinary skill the art. The Office Action's assertions that the remarks provided on page 14 and 15 of the prior Response were somehow directed to the intended operation rather than support for term "self-closing" further mischaracterizes the Response.

Figures 4A-4C and the corresponding description (at pages 18 and 19, for example) describe the illustrated operation of the valve, cover 81 and actuator arm 84 among other components. As shown clearly in these figures, the cover is closed whenever the portion 86 of the actuator is not engaged with the cover. Applicant's remarks in the prior Response are not repeated in their entirety here, however in summary, the remarks provided at the bottom of page 14 and the top of page 15 describe that the specification conveys to one of ordinary skill in the art that the cover 81 is necessarily a self-closing cover because independent fluid control of two bladders from a common pump 650 via a common compartment 645 as described in the specification is not achievable without the cover 81 being a self-closing cover. In particular, neither the figures nor the accompanying description show or describe any structure or apparatus external to the cover that can possibly be interpreted as providing another means to close the cover. Instead, FIG. 6C illustrates a dual mattress embodiment in which a single pump 650 provides fluid to a compartment 645 to the valves 620a and 620b to fill mattresses 605a and 605b, respectively. Further, an arm 635 may "only displace the cover, such that air pressure from the pump displaces the diaphragm." Because the valves open under pressure from the fluid moving device, one of ordinary skill in the art would find that the self-closing operation of the cover is necessarily apparent because the cover must return to the closed position following an inflation of a first mattress (e.g., the mattress 605a) to prevent a later unintended inflation of the first mattress when a second mattress (e.g., the mattress 605a) is inflated using the common pump 650.

For at least the above reasons, the specification and figures do convey with reasonable clarity that the inventor was in possession of the claimed invention, in particular, the "self-closing cover" at the time the application was filed. Accordingly, reconsideration and withdrawal of the rejection of claim 69 under 35 U.S.C. §112, second paragraph, is respectfully requested.

Rejections Under 35 U.S.C. §102

1. The Office Action rejects claims 1, 7, 10, 11, 13-15, 66, 67, and 69 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,175,297 to Robbins et al. (hereinafter “Robbins”). Applicant respectfully disagrees because the Office Action mischaracterizes Robbins, in particular, mischaracterizes the pump described by Robbins.

As an initial matter, Applicant notes that the “fluid controller” recited in claim 1 includes “a valve” and the valve includes “a diaphragm adapted to selectively maintain fluid in the bladder, and a cover configured to be biased open by a mechanical device.” The Office Action states that Robbins describes the “fluid controller” 40, a valve “within 40” where the valve is cited as comprising “a diaphragm 42, 53 with a ‘self-closing’ cover 43/44, 54, 55.” (Office Action at page 4.) The deficiencies with this approach are described below.

First, the apparatus 40 is a pump. If for the sake of argument, one allows that a pump is include in the genus “fluid controllers,” the fluid controller illustrated by Robbins is still of the species “pump.” A pump is not a valve. Yet the Office Action implies that the internals of the pump 40 generally comprise a valve. Certainly, each of the “inlet valve 43” and the “exhaust valve 44” are included in the pump 40. (Col. 4, lines 35-44.) However, these are clearly valves that open and close in response to the operation of the pump. Applicant respectfully asserts that the diaphragms 42 and 53 taught by Robbins are pumping means. In particular, Robbins describes that, in operation, a first of these pump-diaphragms operates to increase the volume of a first pumping chamber 41 while a second of these pump-diaphragms operates to decrease the volume of a second pumping chamber 52. (Col. 4, lines 48-59.) This does not describe an operation of a valve including a diaphragm adapted to selectively maintain fluid in the bladder. Thus, Robbins makes it clear that the diaphragms 42, 53 are not included as part of a valve. Accordingly, Robbins fails to describe “a valve” including “a diaphragm.”

Consistent with the preceding, Robbins also fails to describe “a cover configured to be opened by a mechanical device” as recited in claim 1. As described above, the Applicant does not agree that the “inlet valve 43” and the “outlet valve 44” are covers because they are described as valves and operate as valves. Further, even if one were to consider that valve 43 and valve 44 were somehow covers, they are not “configured to be opened by a mechanical

device" as recited in claim 1. Instead, the valves 43, 44 are opened by a difference in air pressure across the valve.

Each of claims 7, 10, 11, 13-15, 66, 67, and 69 depend either directly or indirectly from claim 1. Each of these dependent claims is allowable for the reasons described above concerning claim 1. Thus, reconsideration and withdrawal of the rejection of claims 1, 7, 10, 11, 13-15, 66, 67, and 69 under 35 U.S.C. §102(b) as being anticipated by Robbins is respectfully requested.

2. Claims 1-6, 10, 11, 13-15, and 67-69 were rejected under 35 U.S.C. §102(b) as being anticipated by Bolden. Applicant respectfully notes that Bolden is made of record for the first time in the instant Office Action. Thus, as described above, the finality of this rejection is premature.

The Office Action mischaracterizes Bolden when applying it against the pending claims. Bolden illustrates a pilot check valve 142. (Figure 8.) The valve 142 is described as including an air inlet 154, an air outlet 158, a moveable valve body 164, a valve seat 168, a push rod 170 [sic] and a spring 170. (Col. 6, line 63 to col. 7, line 31.) The valve 142 also includes a diaphragm 174, a wave washer 178 and a port 180. Id. In operation, a flow of air through the port 180 "pushes against diaphragm 174 causing push rod 170 [which is a part of the moveable valve body 164] to unseat the O-ring 166 from valve seat 168. Therefore, air entering through inlet 154 can pass through passageways 156 and 162 and exit through outlet 158." (Col. 7, lines 25-29.) That is, air can exit the outlet 158 to inflate an air zone of the bed 10 when the O-ring is unseated.

The Office Action mischaracterizes Bolden by applying it to allegedly describe the "diaphragm" (the diaphragm 174 of Bolden) and the "cover" (the "cover 164" of Bolden). (Office Action at page 5.) The approach mischaracterizes Bolden because the "moveable valve body 164" is not a cover. Claim 1 recites that the valve includes a cover. One of ordinary skill in the art would not identify the moveable valve body described in Bolden as a cover of a valve because the travel of the moveable valve body is the very thing that connects valve's air inlet 154 to valve's air outlet 158 when the valve opens. No other element of Bolden is capable of doing so. In contrast, claim 1 recites that a valve includes both "a diaphragm adapted to selectively

maintain fluid in the bladder and a cover configured to be biased open by a mechanical device, the cover being adapted to prevent the flow of fluid through the valve and into the bladder, when closed.”

This approach further mischaracterizes Bolden because Bolden does not describe “a diaphragm adapted to selectively maintain fluid in the bladder” as recited in claim 1. In particular, the diaphragm 174 of Bolden does not “selectively maintain fluid in the bladder.” Instead, in Bolden, the O-ring (not the diaphragm) maintains a seal when seated and allows air flow when the valve operates to unseat the O-ring.

Each of claims 2-6, 10, 11, 13-15, and 67-69 depend either directly or indirectly from claim 1. Each of these dependent claims is allowable for the reasons described above concerning claim 1. Thus, reconsideration and withdrawal of the rejection of claims 1-6, 10, 11, 13-15, and 67-69 under 35 U.S.C. §102(b) as being anticipated by Bolden is respectfully requested.

3. Claims 1-3, 6, 10, 11, 16, and 67-69 were rejected under 35 U.S.C. §102(b) as being anticipated by Chung. Applicant respectfully disagrees with this rejection because Chung does not describe anything concerning a valve including a diaphragm and a cover. Applicant also notes that this rejection is a new ground of rejection because it applies the embodiment illustrated in Fig. 9 of Chung for the first time. Thus, as described above, the finality of this rejection is premature.

In addition, Applicant respectfully asserts that the Office Action clearly mischaracterizes Chung in applying the reference to reject the claims. Figures 9A-9D of Chung illustrate an inflatable umbrella that includes “three check valves 96, 97 and 98.” (Page 4, paragraph 77.) In operation, outside air is drawn into the umbrella via valves 97 and 98 during inflation and exhausted from the umbrella via valve 96 during deflation. (Page 4, paragraphs 77-80.) As illustrated in the figures, each of the valves 96 and 97 are check valves that are biased closed by a spring and moved to an open position by a ring switch 99. Thus, the valves 96, 97 appear to include identical structure and operate in an identical manner.

The Office Action, however, states that Chung describes a valve comprising “a diaphragm 96 with a ‘self closing’ cover 97.” (Office Action at page 6.) This approach clearly

mischaracterizes Chung at least because the Office Action indicates that a first check valve 96 is a diaphragm and a second check valve 97 (having an apparent identical construction to the first check valve) is a cover. In addition, the valve 96 and the valve 97 operate independently. During inflation, the valve 96 opens when the ring switch is in a first position with the valve 97 closed. (See Fig. 9B.) During deflation, the valve 96 is closed when the ring switch is in a second position with the valve 97 opened. (See Fig. 9D.) Thus, the Office Action implies that an inlet valve and an outlet valve can somehow comprise components of a single valve (where the inlet valve is somehow a cover). Applicant respectfully asserts that the application of Chung asserted in the Office Action relies on the mischaracterization of the valves included in the inflatable umbrella described by Chung. In summary, Chung fails to describe any valve that includes a cover configured to be biased open by a mechanical device, as recited in claim 1.

Each of claims 2, 3, 6, 10, 11, 16, and 67-69 depend either directly or indirectly from claim 1. Each of these dependent claims is allowable for the reasons described above concerning claim 1. Accordingly, reconsideration and withdrawal of the rejection of claim 1-3, 6, 10, 11, 16, and 67-69 under 35 U.S.C. §102(b) as being anticipated by Chung is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 12 and 14-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bolden in view of Chung. Claims 12 and 14-16 indirectly depend from allowable claim 1, which distinguishes over each of Bolden and Chung, and therefore the asserted combination, for at least the same reasons discussed above. Accordingly, reconsideration and withdrawal of the rejection of claim 12 and 14-16 as being unpatentable over Bolden in view of Chung is respectfully requested.

Claims 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bolden in view of U.S. Patent 6,098,000 to Long et al. (hereinafter “Long”). Applicant notes that this rejection is a new ground of rejection because Long is cited for the first time in this Office Action. Thus, as described above, the finality of this rejection is premature. In addition, claims 7-9 indirectly depend from claim 1 which is allowable in view of Bolden as described above.

Long fails to cure the deficiencies of Bolden as applied to claim 1. Accordingly, reconsideration and withdrawal of the rejection of claims 7-9 as being unpatentable over Bolden in view of Long is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner and the Examiner's supervisor are requested to call the Applicant's attorney at the telephone number listed below. In other words, should the Examiner continue to insist on the frivolous rejections of this Office Action and the premature finality of those rejections, Applicant requests a telephone interview with the Examiner and the Examiner's supervisor to discuss the nature and the finality of the rejections.

A petition and fee for a one month extension of time is included herewith. If this response is not considered timely filed in view of the petition and fee, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by the payment included here, please charge any deficiency to Deposit Account No. 50/2762, Ref. No. C0852-703030.

Respectfully submitted,
Robert B. Chaffee, Applicant

By: Robert V. Donahoe
Robert V. Donahoe, Reg. No. 46,667
LOWRIE, LANDO & ANASTASI, LLP
One Main Street
Cambridge, Massachusetts 02142
United States of America
Telephone: 617-395-7000
Facsimile: 617-395-7070